

REMARKS

By the foregoing amendments the specification has been amended to correct the reference to related applications on page 1 to reflect that the application is a U.S. national stage application under 35 U.S.C. § 371 of international application PCT/US03/011788 filed April 17, 2003. The related U.S. national stage application of international application no. PCT/US02/33220, now U.S. Patent No. 7,056,368 issued June 6, 2006, is also referred to by the amendments on page 1. Claim 2 has been cancelled, claims 1, 6, 9, 14, 17, 22 and 23 have been amended. Thus, claims 1 and 3-23 are in the application.

Applicants gratefully acknowledge the courteous personal interview granted by Examiner Samantha Miller, and Supervisory Patent Examiner Steven B. McAllister to Applicants and their undersigned attorney on July 28, 2011. During the interview Applicants discussed the powered air cleaning system and method of the present invention and contrasted the same with the passive air cleaners in the newly cited patents to Vanderauwera, U.S. 5,545,241 and Rocklitz, U.S. 6,451,080. Product samples were shown to the Examiners as part of this presentation and operated to demonstrate the positive air flow pressure and self cleaning action on the filter and the ejection of debris laden air under positive pressure from the ejector port which occurs with a powered air cleaning system of the invention. This was contrasted with a passive air cleaner with no motor-driven fan therein which relied on suction from a downstream device for drawing air through the air cleaner. It was demonstrated that with the latter device there was no positive air pressure

flow from the ejector port/scavenge of the device and no self cleaning action on the filter during operation of the device as it had a vacuum or negative pressure pulled on the outer surface of the filter throughout its operation. The same is true in each of the newly cited primary references to Vanderauwera et al., U.S. 5,545,241 and Rocklitz, U.S. 6,451,080 as discussed below. The undersigned presented comments and proposed amendments to the claims during the interview as set forth below responsive to the outstanding rejections of claims under 35 U.S.C. §103 and §112 to clarify these differences between the invention and the cited references.

Claims 1-15 were rejected in the outstanding Office Action under 35 U.S.C. § 112, second paragraph, as being indefinite because the expression "wherein the system includes at least one component defining a portion of the flow path through the system, which component is separable from the system" is unclear as to what Applicant's component is. Responsive to the rejection, by the above amendments independent claim 1 has been amended to include the limitations of cancelled claim 2 which recite that the at least one component is selected from the group consisting of a detachable fan housing containing the motor-driven fan and a detachable filter housing containing the air filter. In view of the amendments, it is respectfully submitted that claims 1 and 3-15 are proper under 35 U.S.C. §112, second paragraph. The examiners agreed during the interview that with this change the rejection under 35 U.S.C. §112 was overcome.

Claims 1-5, 9, 10 and 12-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over the newly cited patent to Vanderauwera, U.S. 5,545,241 in view of the patent to Moredock, U.S. 6,319,304. The references

are combined for the reasons and in the manner stated on pages 3-5 of the Office Action.

Claims 6-8 and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Vanderauwera in view of Moredock and in further view of the patent to Moredock, U.S. 6,406,506 as stated on pages 5 and 6 of the Office Action.

Claims 16 and 20-22 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the newly cited patent to Rocklitz, U.S. 6,451,080 in view of Vanderauwera. The references are combined as stated on pages 6-9 of the Office Action.

Claims 17-19 and 23 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Rocklitz in view of Vanderauwera in further view of Moredock, U.S. 6,406,506 as stated on pages 9 and 10 of the Office Action.

These rejections are hereby traversed and reconsideration thereof is respectfully requested in view of the above amendments to the claims and the remarks and demonstration during the personal interview on July 28 as summarized below.

The improved power air cleaning system and method of making the same of the present invention as recited in the claims as amended are not rendered obvious, 35 U.S.C. §103, by the aforementioned references relied upon in the rejections of the claims in the outstanding Office Action. Unlike the present invention, the newly cited patent to Vanderauwera is not a powered air cleaning system with a motor-driven fan within the system. Rather, the air cleaner of Vanderauwera is a passive system with no motor-driven fan, relying on a vacuum applied at the outlet of the air cleaner to draw

air into the air cleaner. Thus, it does not operate with a positive airflow pressure on the outer surface of the filter so that the rotating flow about the filter causes a self cleaning action on the filter as in the present invention as recited in the claims as amended. There is support for these limitations in lines 7-22 on page 8 of the Substitute Specification, for example.

Further, unlike the present invention as claimed, Vanderauwera has a scavenge 70 which collects dust but the nipple 74 of the scavenge is closed during operation of the device and does not serve as an ejector port for ejecting particulate debris laden air under positive pressure during operation of the device as demonstrated by the inventors, see column 3, lines 56-63 of Vanderauwera.

The secondary reference to Moredock, U.S. 6,319,304 was relied upon for its disclosure of a motor-driven fan located along the flow path of the air precleaner device, Figure 1B and column 3, lines 52-61. However, the air precleaner device of Moredock, U.S. 6,319,304 is a stand alone air precleaner which does not include an air filter. See column 4, lines 43-47 noting that the airflow outlet shroud 38 of the air precleaner device directs the cleaned air to the radiator core or air filter media or the combustion engine intake, 37 in FIG. 1. The airflow outlet shroud 38 can also support or hold the air filter media 37 in place. There is no teaching or suggestion of providing a positive pressure from the motor driven fan of the air precleaner device on the outer surface of an air filter elongated in the direction of the axis of the rotating air flow so that the rotating flow about the filter causes a self cleaning action on the filter as in the present invention. Moredock, U.S. 6,319,304 also does not teach providing a detachable fan housing containing the motor-driven fan and a

detachable filter housing containing the air filter as components separable from the system as in the present invention. The combination of Moredock, U.S. 6,319,304 with Vanderauwera does not render Applicants' claimed invention obvious, 35 U.S.C. §103.

The secondary reference to Moredock, U.S. 6,406,506 relied upon in the rejection of claims 6-8 and 11, and in the rejection of claims 17-19 and 23 is not prior art with respect to the claims of the present application. As noted by the above amendments to the Substitute Specification, the application is a U.S. national stage application under 35 U.S.C. §371 of international application PCT/2003/011788 filed April 17, 2003. Further, the applicants of the present application are the same applicants/patentees in Moredock, U.S. 6,406,506. Since Moredock, U.S. 6,406,506 issued June 18, 2002, less than one year prior to the effective filing date of the application claims, April 17, 2003, and is not by another, Moredock, U.S. 6,406,506 is not prior art under 35 U.S.C. §102 or 103.

The newly cited primary reference to Rocklitz, U.S. 6,451,080 relied upon in combination with Vanderauwera in the rejection of claims 16 and 20-22, and relied upon in combination with Vanderauwera and Moredock, U.S. 6,406,506 in the rejection of claims 17-19 and 23, discloses a passive air cleaner wherein a spinner assembly 46 utilizes the energy of the air being drawn into the air cleaner 30 by a vacuum applied at the outlet tube 58 for drawing air through the air cleaner and rotating the spinner assembly using the interaction of the air with the inner turbine blades 83 to rotating the outer blades 84 and transfer the energy as referred to in column 10, claim 1, paragraph F. Rocklitz notes that an air flow rate of 385 cfm through the air

cleaner will cause the spinner assembly 46 to rotate at a rate less than 4,000 rpm during normal use. While Rocklitz makes the gratuitous statement in column 9, that "in certain embodiments, a motor may be added to the spinner assembly to increase efficiency and reduce pressure drop", the patent discloses no such embodiments.

Rocklitz is also deficient in not providing an air filter within the rotating flow, the air filter being elongated in the direction of the axis of the rotating flow such that a motor-driven fan operated to maintain a positive air flow pressure of the outer surface of the filter causes a self-cleaning action on the filter as disclosed and claimed by Applicants. The deficiencies of Rocklitz are not provided for the secondary reference to Vanderauwera which, as noted above, is not a powered air cleaner but a passive system. The secondary reference to Moredock, U.S. 6,406,506 relied upon in the rejection of claims 17-19 and 23 in combination with Rocklitz and Vanderauwera is not prior art against Applicant's claims for the reasons noted above.


In view of the aforementioned personal interview, the above amendments and remarks, it is respectfully submitted that the claims as amended patentably define over the cited references under 35 U.S.C. §103 and that the amended claims are proper under 35 U.S.C. §112, second paragraph. Accordingly, reconsideration and allowance of the amended claims is requested.

An Information Disclosure Statement is filed herewith citing a copy of an Office Action and documents cited therein issued recently in a related Japanese application.

A Request for Continued Examination is filed herewith to require consideration of the amendments to the claims and information disclosure statement.

Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (Case No. 766.42710AX0) and please credit any excess fees to such deposit account.

Respectfully submitted,

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